

For Reference

NOT TO BE TAKEN FROM THIS ROOM

For Reference

NOT TO BE TAKEN FROM THIS ROOM

Ex LIBRIS
UNIVERSITATIS
ALBERTENSIS



UNIVERSITY OF ALBERTA

ANTI-SEMITISM, STRESS AND ANCHOR EFFECTS
ON INTERPERSONAL JUDGMENTS

by

Donald George Fischer

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF ARTS.

DEPARTMENT OF PSYCHOLOGY

EDMONTON, ALBERTA

AUGUST, 1966

UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Anti-Semitism, Stress and Anchor Effects on Interpersonal Judgments", submitted by Donald George Fischer in partial fulfilment of the requirements for the degree of Master of Arts.

Abstract

The purpose of this study was to demonstrate the effects of stress, prejudice and anchor on social perception. Stress was induced by giving the subjects a list of thirteen difficult anagrams to solve, accompanied with mild stress and severe stress-inducing instructions. The anchor was established by giving the subjects a favorable or unfavorable assessment of themselves, ostensibly from their peer. Subjects were selected on the basis of their scores on a ten-item anti-Semitism and a twenty-eight-item F scale questionnaire. Ninety-six subjects were run in twenty-four groups of four each. The groups were homogeneous with respect to sex and prejudice. In the experimental situation subjects were seated in cubicles, provided with an anchor, subjected to stress and then asked to evaluate two other persons (strangers) in the group. These evaluations were employed as measures of social perception. Favorability scores were analyzed by analysis of variance. The three levels of prejudice, two levels of stress and two levels of anchor combined with two persons evaluated formed a $3 \times 2 \times 2 \times 2$ split-split plot design. A high score indicated low favorability, a low score indicated high favorability. The significant findings from the study were as follows:

1. Less friendliness was expressed following the presentation of a negative anchor than a positive one;
2. Less friendliness was shown by the high and low prejudiced groups following severe stress whereas

greater friendliness was shown by the moderately prejudiced group following severe stress;

3. Less friendliness was expressed toward the first person evaluated than the second; and
4. A significant third order interaction pointed to the conditional nature of these results.

The results were discussed briefly in terms of assimilation and contrast effects.

Acknowledgements

This author would like to offer a special thanks to Dr. Brendan G. Rule for her guidance and encouragement throughout the course of this research. Also, comments given by Dr. T. Nelson, Dr. C. Hobart and Professor A. J. Hough were very much appreciated.

Donald George Fischer.

T C B I L L

TABLE OF CONTENTS

	Page
ABSTRACT	iii
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	vii
LIST OF TABLES	viii
LIST OF APPENDICES	ix
INTRODUCTION	1
Assimilation and Contrast.....	2
Individual Differences in Categorizing Tendencies.....	4
Predictions.....	10
METHOD	12
The Design.....	12
Subjects.....	12
Apparatus and Materials.....	13
Procedure.....	16
RESULTS	19
DISCUSSION	24
REFERENCES	28
APPENDICES	31

LIST OF TABLES

TABLE		Page
I.	MEAN EVALUATION SCORES FOR HIGH MEDIUM AND LOW PREJUDICED GROUPS FOLLOWING MILD AND SEVERE STRESS.....	20
II.	MEAN EVALUATION SCORES FOR THE PREJUDICE X STRESS X ANCHOR X PERSON INTERACTION.....	21
III.	SUMMARY OF ANALYSIS OF VARIANCE OF EVALUATIONS OF STRANGERS.....	23

LIST OF APPENDICES

APPENDIX		Page
A.	ANAGRAMS.....	32
B.	RATING SCALE.....	33
C.	POSITIVE AND NEGATIVE ANCHORS.....	34
D.	ANTI-SEMITISM AND CALIFORNIA F SCALE ITEMS.....	36

Introduction

Social perception as an area for experimental investigation has just recently become recognized as extremely important. How an individual estimates or interprets the actions, intentions and personality attributes of other individuals, and how he evaluates groups and social classes suggests many significant problems to the social psychologist. Perhaps the primary importance of social perception stems from the assumption that overt forms of social behavior are governed by the perception of the social environment just as physical behavior is assumed to be regulated by the perception of the physical environment (Lewin, 1948). If a close relationship does exist between behavior and perception, inappropriate or maladaptive interrelations may turn out to be, in some measure, the consequence of inaccurate social perception.

The problem of social perception with regard to real social stimuli (people) has received relatively little attention in the literature. Most studies have been concerned with the distorting effect of attitude on picture stimuli; the biasing effects of needs, values and emotions on the estimation of such characteristics as the size of physical objects; or on the attribution of maliciousness and other characteristics to photographs (Pepitone, 1965). However, some studies have dealt with perception of people. Early studies with regard to perception of people focused on the accuracy of perception of personality traits. Such studies assessed the characteristics of

the judge and the processes used in judging, and the criteria used in assessing accuracy (Lindzey, 1959 ed.). Because of the confounding effects in studying accuracy of judgment the modern trend of studies focuses on processes involved in perceiving other people. These include the organized nature of impressions of personality and the processes of organization and grouping (Asch, 1946, 1952), processes involved in perception and recognition of ethnic group membership (Lindzey, 1954), perceptual and judgmental processes in social phenomena (Sherif, 1956; Berkowitz, 1959, 1960, 1961; Hovland & Pritzker, 1957 ; Hovland & Sherif, 1961; Epstein, 1965; Dillehay, 1965; Rule, 1966), and adaptation level theory and perceptual frame of reference (Helson, 1948).

While some progress has been made in understanding perceptual and judgmental processes, major questions regarding the nature of the judgmental processes and the relationship between judgmental processes and social interaction variables such as prejudice and hostility displacement remain unanswered. One particular judgmental effect appears to shed light on these processes. This is assimilation and contrast.

Assimilation and Contrast.

Sherif and Cantril (1945, 1946) were among the first to apply the psychology of perception and judgment to social psychology. They suggested that when an individual forms an attitude he learns to make a class of judgments, in the course of which an issue or an object is related to an appropriate frame of reference. To paraphrase, judgments made in the experimental laboratory and judgments made in the most complicated social situations follow the same laws, ". . . the basic psychological

substrata functioning in both cases are the same in nature." In each case, regardless of the situation in which the judgment is made, the psychological substrata involves the act of categorization. As Bruner (1957) has put it, "we stimulate an organism with some appropriate input . . . he responds by referring the input to some class of things or events . . . whatever is perceived is placed in and achieves its meaning from the class of percepts with which it is grouped." For example, confront a subject with a number of small metallic objects and he will classify them as to weight, with some being relatively light and others being relatively heavy. A category defines the continuum, or continua, along which the evaluated stimuli are placed. It establishes the relationships that may exist among the stimuli (e.g., heavier or lighter than). Judgment then, is a function of these relationships.

Two particular kinds of judgmental phenomena are of concern here; contrast and assimilation. Since all judgments are made with respect to a frame of reference, one can say that evaluations are a function of the relationship between some standard, or anchorage stimulus (frame of reference) and the position in which the evaluated stimulus would be placed by an observer who had not experienced the standard. If the psychological distance between these two stimuli is relatively small there is assimilation, i.e., the subject locates the stimulus in some position between the standard and the observer's judgment. On the other hand, contrast takes place when this distance is relatively great, i.e., the subject locates the evaluated stimulus in some position outside the standard and the observer's judgment.

Berkowitz (1961) has extended the application of these phenomena to the areas of interpersonal perception and personality differences. He suggested that these effects are manifested in judgments of people and that it should be possible to predict interpersonal reactions on the basis of this formulation. He further emphasized that there are reliable differences in category width, that is in the tendency to assimilate, or the tendency to contrast.

With this in mind the discussion will turn to individual differences in categorizing tendencies.

Individual Differences in Categorizing Tendencies.

Gardner (1953) and Pettigrew (1958) were among the first investigators to demonstrate reliable individual differences in categorizing tendencies. Pettigrew found that when subjects were asked to estimate the extremes of a number of diverse topics, ranging from the length of whales to the annual rainfall in Washington, D.C., they showed a significant tendency to be consistent in their category ranges. That is they were consistently broad, medium or narrow in category width relative to the total sample of subjects. Gardner studied the categorizing tendencies of subjects dealing with five adaptive tasks:

- (1) an object-sorting test;
- (2) size-constancy (object) judgments;
- (3) size-constancy (sensory) judgments;
- (4) shape-constancy (sensory) judgments; and
- (5) brightness judgments.

The results of the study supported the hypothesis that persons are characterized by consistent differences in what they will accept as similar or identical. In other words, data supported the hypothesis that persons are characterized by unique equivalence-range preferences, or category width preferences.

Other experimenters have focused on differences in degree of authoritarianism as a reflection of differences in categorizing behavior. It was hypothesized that because of the rigid cognitive style of the authoritarian there is a relationship between the authoritarian personality and categorizing tendencies. The particular cognitive style of the authoritarian is characterized by extreme rigidity and intolerance of ambiguity (Christie & Jahoda, 1954). Ambiguity in this sense refers to the complexity and differentiation which is an essential aspect of the creative process rather than undesirable aspects of cognition. The aspects of intolerance of ambiguity include: undue preference for symmetry, familiarity, definiteness and regularity; a tendency toward black white solutions, over-simplified dichotomizing, unqualified either-or solutions, premature closure, perseveration and stereotypy; a tendency toward excessively good form achieved either by diffuse globality or over-emphasis on concrete detail; compartmentalization, stimulus-boundness; avoidance of uncertainty as accomplished by the narrowing of meanings, by inaccessibility to experience, by mechanical repetition of sets, or by a segmentary randomness.

The problem of rigidity which is related to the more general problem of intolerance of ambiguity, has been investigated by a number

of experimenters (Rokeach, 1948; Elsie Frenkel-Brunswik, 1949; Block & Block, 1951; Kutner, 1951; Christie, 1950; Barron & Welsh, 1952). Rokeach found that children scoring extremely high on ethnic prejudice were significantly more rigid in solving the Einstellung problems than were children scoring low on prejudice. Block and Block, utilizing the autokinetic phenomenon, demonstrated intolerance of ambiguity in highly ethnocentric subjects. Highly ethnocentric subjects stabilized their judgments on fewer trials than did less highly ethnocentric subjects, thus exhibiting greater rigidity. Kutner found that children scoring low on ethnic prejudice demonstrated awareness of the abstract conceptual nature of a given test, whereas high scoring children exhibited a concrete approach. High scorers produced numerous fanciful responses culminating in failure, and tended to generalize and develop supernumerary hypotheses. Christie studied the effects of frustration on rigidity of set, in solving the Einstellung problems. He found that highly frustrated subjects used the set solution twice as long and thus required twice the amount of time to solve the final problem as low frustrated subjects. He concluded that frustration increases the strength of the set and behavioral rigidity is manifested. Baron and Welsh used esthetic preference involving a large number of simple-symmetrical and complex-asymmetrical figures to study intolerance of ambiguity. They found that subjects preferring the symmetrical figures tend to be less original, less intellectual, less sensual, less internalized, more constricted, more conservative, more ethnocentric, more conformant and less independent than those preferring the asymmetrical figures.

In summary, it is apparent that rigidity in cognitive functioning does exist, and also that the authoritarian personality, as manifested in prejudice and ethnocentrism, is one cause of such functioning. It is conceivable then, that one might find a relationship between authoritarianism and category width. The discussion now turns to more recent evidence regarding this relationship.

Recent studies with respect to the authoritarian personality demonstrate that variations in category width are a function of certain situational factors: stress, anchor, social status (Berkowitz, 1959, 1961; Brown, 1953; Rule, 1966; Epstein, 1965). Epstein designed an experiment to study the effects of personality (authoritarianism) and situational (social status, frustration) factors on displaced aggression. He found that differential aggressiveness toward low and high status targets was maximal under nonfrustration conditions; and also that it was maximal for the high authoritarian group. Although Epstein did not analyze the results in these terms, it is suggested by this writer that frustration serves to broaden the judgmental categories permitting the high and low status targets to be grouped together in the same category so that minimal differential aggressiveness is expressed in the frustration condition and maximal differential aggressiveness is expressed in the nonfrustration condition. Brown demonstrated that highly authoritarian individuals tend to exhibit greater problem-solving rigidity than less authoritarian individuals, only when placed in a mildly stressful, ego-involving situation. Again, one might say that stress serves to broaden the judgmental categories and permits

minimal discriminations among stimuli, but in this case only for the high authoritarian individuals. Berkowitz (1959) reported that characteristically high prejudiced people are more likely to displace aggression on an innocent bystander than low prejudiced people under conditions of frustration. He found that for nonangered subjects there was no difference between the high and low prejudiced females in their rated friendliness toward a peer. However, for the angered subjects the low prejudiced females became friendlier toward the peer, while the high prejudiced females became more hostile. Again, stress served to broaden the judgmental categories of the highly prejudiced, more authoritarian, subjects. In this case, for the high prejudiced subjects, apparently the annoying experimenter, who served as a judgmental anchor, and the peer were grouped together in the same category so that the hostility aroused by the former was generalized readily to the latter. However, for the low prejudiced subjects, stress served to narrow the judgmental categories. The annoying experimenter and the peer were separated into different categories. A contrast effect occurred and the peer seemed more favorable than would otherwise have been the case had the unfriendly experimenter not been encountered.

A second study by Berkowitz (1961) attempted to relate findings in the interpersonal context to situations more similar to those in psychophysical experiments. He used adjectives as stimuli and a series of positively-toned adjectives as a "good" or positive anchor, and a series of negatively-toned adjectives as a "bad" or negative anchor. He found that judgmental categories of high prejudiced persons tend to

broaden under stress conditions only following the presentation of a positive anchor, whereas categories of low prejudiced persons tend to narrow under stress conditions only following presentation of a negative anchor. He reported that evaluations of neutral adjectives by high prejudiced subjects, under stress, were affected reliably only when they followed the "good" comparison standard. On the other hand, evaluations of neutral adjectives by low prejudiced subjects, under stress, were affected reliably only when the adjectives followed a "bad" comparison standard. These results lend only partial verification to Berkowitz's notion of hostility displacement and they severely limit the range of application of assimilation and contrast interpretations to data regarding interpersonal reactions.

Despite the foregoing evidence that there are differences in categorizing tendencies between high and low prejudiced persons, Rokeach (1960) suggests that extremists' conceptual systems are similar. He suggests that individuals who adhere to extreme points of view tend to behave in the same way, although the content of their attitudes may differ. Thus high and low prejudiced persons should manifest similar categorizing tendencies. Rule (1966) investigated this possibility. She found that both extremely high and extremely low prejudiced persons, under stress, tended to report greater personality differences between two strangers and were more negative in their evaluations than moderately prejudiced persons. The apparent discrepancy with Berkowitz's (1959, 1961) findings seems to be accounted for in terms of the subject selection criteria in each study. Berkowitz's low prejudiced group

appears comparable to Rule's moderate group. Therefore, Berkowitz's findings presumably indicate differences between high and moderate rather than high and low prejudiced individuals. Thus Rule supports Rokeach's notion of similarity of extremists' conceptual system and Berkowitz's findings of generalized hostility displacement by highly prejudiced persons.

In summary, it is evident that there are reliable individual differences in categorizing tendencies. Category width has been shown to vary as a function of prejudice, stress and anchor. Precisely how these variables interact is an important empirical question which has not been investigated. The purpose of this study was to investigate the interaction of these variables in an interpersonal situation.

Predictions.

Based on Rule's (1966) study it was predicted that high and low prejudiced persons would manifest similar judgmental processes. Based on previous evidence (Berkowitz, 1959, 1961; Rule, 1966) it was predicted that high and low prejudiced individuals would be more likely to generalize hostility under stress than moderately prejudiced individuals. Since Berkowitz's work dealing with hostility generalization in the interpersonal situation is clearly related to the negative anchor condition, it was expected that high and low prejudiced persons would generalize hostility following a negative anchor. This result was predicted in spite of Berkowitz's (1961) finding which did not support assimilation following a negative anchor. One must bear in mind that in this study

Berkowitz had subjects evaluate neutral adjectives following a good and bad comparison standard, rather than persons. This stimulus difference could account for the unexpected finding.

Method

The interaction of stress, anchor and prejudice in social perception was assessed by placing subjects in a non-interacting group situation and having them assess other members of the group. The degree of prejudice was determined prior to the experimental session by administering the anti-Semitism and F scale (Adorno et al, 1950). The stress and anchor variables were experimentally manipulated during the session.

The Design

Three levels of prejudice, two levels of stress and two levels of anchor together with two persons evaluated were combined to form a $3 \times 2 \times 2 \times 2$ split-split plot design. The groups of prejudice included high, medium and low; the groups of stress involved mild and severe; and the groups of anchor included favorable and unfavorable.

Subjects

Six hundred and thirty-nine male and female introductory psychology students at the University of Alberta completed a questionnaire which included a 10-item anti-Semitism scale and the 28-item F scale (Adorno et al, 1950). Appendix D contains this scale.

For both scales, items varied from five points for a response indicating strong agreement with an item to one for a response indicating strong disagreement. The resulting distributions for the total sample were: A-S scale, range 10-50, median 22; F scale, range 41-118, median 82. From this sample ninety-six subjects were selected for study,

fifty-eight males and thirty-eight females randomly distributed throughout the groups. Experimental groups consisted of thirty-two subjects each of high, medium and low prejudiced individuals. Prejudice was determined by joint selection on each of the two scales. The high prejudiced group consisted of the upper one-fifth of the A-S distribution and the upper one-third of the F distribution, the medium consisted of the middle one-fifth and one-third of each distribution respectively, and the low prejudiced group consisted of the lower one-fifth and one-third of each distribution respectively. The median scores for the groups were: high A-S 29, F 92; medium A-S 21, F 82; low A-S 14, F 65.

Apparatus and Materials

The experimental room consisted of four chairs and a table six feet long divided by plywood panels into four compartments. Another plywood panel enclosed the front of each compartment. A small 4 x 10 inch opening at the bottom-center of each front panel permitted passage of written material to and from the subjects.

Anagrams, used to create stress, consisted of a series of thirteen disarranged words accompanied with stress-inducing instructions. The anagrams corresponded to the problems used by Sarason (1961). They were selected because of their extreme difficulty and high reliability in arousing frustration. They are contained in Appendix A.

Rating scales, contained in Appendix B, were used to measure hostility displacement. They consisted of thirteen bipolar adjectives, each evaluated using a 7-point system. A score of seven indicated a high hostility rating, a score of one indicated a low hostility rating.

Pre-established hostility scores were used as anchors. These are found in Appendix C. A mean score of 2.61 was used as a positive anchor, a mean score of 5.39 was used as a negative anchor.

A 10-item anti-Semitism scale and a 28-item F scale (Adorno et al, 1950), found in Appendix D, were used to select prejudiced subjects. It has been suggested (Cohn, 1953; Bass, 1955) that since the questionnaire items of the A-S and F scales are worded in such a way that agreement with the items represents, respectively, anti-Semitism or potential fascism, acquiescence is more important than anti-Semitism or authoritarianism in determining scores. In other words, a response set, or tendency to agree with assertions, regardless of their content is thought to be important in determining extreme scores on these scales. Cohn (1953) found a positive correlation of .41 between agreement with a mixed lot of questions from the MMPI and a version of the F scale. The high correlation presumably is indicative of a considerable amount of potential acquiescence inherent in one or both of the questionnaires. Bass (1955) composed reversed versions of the F scale items, and administered both the original scale and the reversed scale to the same subjects. His thinking was that if the authoritarian content were the only determinant of responses, then agreement with an F scale item ought always to be associated with disagreement with the item's reversal, and the resulting correlation should approximate -1.00. The obtained correlation was only -.20, thus negating that content is the sole determinant of responses, and affirming that response sets could operate. Further analysis showed that some subjects consistently

agreed with both authoritarian assertions and their reversals, whereas some subjects consistently disagreed with both kinds of assertions. The agreeing subjects, had they been given the F scales alone, would have appeared to be authoritarian and the disagreeing subjects would have appeared to be equalitarian. On the basis of this study Bass suggested that acquiescence was more important than authoritarianism as a determinant of F scale scores.

Although an assortment of research confirmed the importance of acquiescence as a determinant of F scores, subsequent research by Couch and Keniston (1960) showed that it accounted for only a minimal amount of the total variance. These authors separated empirically "Yeasayers" and "Naysayers" as two kinds of response set, and determined the correlation between these and the F scale. They found it to be $+0.37$, thus indicating that yeasaying is a factor in F scale scores, but only a minor one accounting for approximately 14% of the variance. Hence, content of the items is still the major determinant of the scores obtained.

In summary, although acquiescence does appear to operate in the A-S and F scale scores, recent evidence from more adequately designed and controlled studies suggests that it is minimal. For the purposes of this study acquiescence was considered to be of minimal importance. These two scales were used to select subjects primarily because previous hypotheses regarding hostility displacement have been based on results of studies that have used these specific scales, but also, as Brown (1955) has suggested, response sets to agree or disagree may be extremely important personality characteristics in their own right.

Procedure

Subjects were run in twenty-four groups of four each. The groups were homogeneous with respect to sex and anti-Semitism. Subjects were brought together ostensibly for the study of first impressions of people. To begin the session they were briefly introduced to each other. During the introductions the experimenter asked each subject whether or not he had met any of the other members of the group prior to the experimental session. The nature of the study demanded that the group members be complete strangers. There was one instance in which two members of the group had met previous to the experimental session. In this case one of them was rescheduled to participate in a subsequent session and a substitute was obtained to replace him in this one.

Subjects were seated in compartments which restricted their range of observation. They were told that there were two parts to the study: one was related to problem-solving, the other to first impressions of people. When comfortably seated in compartments subjects were supplied with a rating scale shown in Appendix B, and each was asked to complete an evaluation of the person seated on his right. Since there was no one seated to the right of the person in the extreme right compartment, it was explained to him that he was evaluating the person on his extreme left. Also, to avoid unnecessary confusion and to give the appearance of authenticity, the experimenter wrote the name of each person to be evaluated at the top of each scale prior to the commencement of the experimental session. Upon completion, the evaluations were passed

to the experimenter who ostensibly distributed them to the appropriate person, but in fact substituted favorable and unfavorable evaluations. It was assumed that receiving an unfavorable evaluation of oneself from a peer would induce a negative anchor, and receiving a favorable evaluation would induce a positive anchor. These are shown in Appendix C. This completed the phase constituting the manipulation of the anchor variable. The next phase involved the manipulation of the stress variable.

To manipulate the stress variable subjects were given a list of thirteen difficult anagrams to solve within an eighteen minute period. These were accompanied with stress or non-stress inducing instructions: one half of the subjects received the former, the other half received the latter. Stress inducing instructions were as follows:

Ability to organize material such as the letters on the next page has been found to be directly related to intelligence level. High school students of above average intelligence (IQ greater than 100) and most college students should be able to complete the task successfully. You will have eighteen minutes in which to finish it.

These instructions do typically induce stress (Berkowitz, 1959; Sarason, 1961; Rule, 1966).

Non-stress inducing instructions were as follows:

Most of you have probably worked anagrams. The task on the next page works the same way. These anagrams, however, are harder than most you have seen in books and magazines, consequently you may not finish all of them as you may find some of them very difficult. If this happens don't worry about it. No one will find them easy. You have eighteen minutes in which to finish the task.

The final phase of the experimental procedure involved the collection of the hostility displacement data. This was accomplished by asking each subject to evaluate the two persons seated on his left. Again, to avoid unnecessary confusion the name of each person to be evaluated was written at the top of each scale, and the person seated in the compartment on the extreme left was told that he was evaluating the persons seated on the extreme right. At the completion of the final phase of the experimental session the subjects were informed of the true nature of the favorable and unfavorable evaluations and the anagrams, and were asked to maintain secrecy until completion of the study in about one month's time. The time lapse for the entire session was approximately forty minutes.

Results

Data consisted of evaluations of two persons given by high, medium and low anti-Semitic subjects. Total scores over thirteen adjectives for each of the two persons evaluated were combined to form a $3 \times 2 \times 2 \times 2$ split-split plot design. A low score indicated a favorable evaluation, a high score an unfavorable evaluation.

The results of analysis of variance point to a number of conclusions. First, more unfavorability was expressed following a negative anchor than a positive one ($F = 15.95$, $df\ 1/84$, $p < .01$). The means were 3.16 and 2.67 for the negative and positive anchors respectively. Second, more unfavorability was expressed toward the first person evaluated than the second ($F = 7.86$, $df\ 1/85$, $p < .01$). The means were 3.07 and 2.82 for the first and second persons respectively. Third, the high and low prejudiced persons were more favorable than moderately prejudiced persons under mild stress, whereas the moderately prejudiced persons were more favorable under severe stress ($F = 5.86$, $df\ 2/84$, $p < .01$). Table I contains the means for this interaction.

Finally, prejudice, stress, anchor and person evaluated significantly interacted ($F = 4.31$, $df\ 2/85$, $p < .01$). The means for this interaction are shown in Table II. With regard to the first person evaluated, high and low prejudiced groups increased in unfavorability as stress increased from mild to severe, following a negative anchor, and decreased in unfavorability as stress increased following a positive anchor. The moderately prejudiced group decreased in unfavorability as

TABLE I

MEAN EVALUATION SCORES FOR HIGH, MEDIUM AND LOW
PREJUDICED GROUPS FOLLOWING MILD AND SEVERE STRESS

	Mild Stress	Severe Stress
Low prejudice	2.56	2.87
Medium prejudice	3.36	2.76
High prejudice	2.98	2.96

TABLE II

MEAN EVALUATION SCORES FOR THE PREJUDICE X STRESS X
ANCHOR X PERSON INTERACTION

First Person Evaluated					
Positive Anchor			Negative Anchor		
	Mild Stress	Severe Stress		Mild Stress	Severe Stress
Low prejudice	2.88	2.73	Low prejudice	2.53	3.15
Medium prejudice	3.21	2.48	Medium prejudice	3.62	3.23
High prejudice	2.91	2.61	High prejudice	3.25	3.50
Second Person Evaluated					
Positive Anchor			Negative Anchor		
	Mild Stress	Severe Stress		Mild Stress	Severe Stress
Low prejudice	2.30	2.79	Low prejudice	2.53	2.80
Medium prejudice	2.85	2.30	Medium prejudice	3.76	3.00
High prejudice	2.39	2.55	High prejudice	3.38	3.16

stress increased following both the positive and negative anchor. Thus, high and low prejudiced persons exhibited an assimilation to the anchor effect, under severe stress, following both the positive and negative anchor; while moderately prejudiced persons exhibited an assimilation effect only following the positive anchor, and exhibited a contrast effect following the negative anchor, under severe stress.

With regard to the second person evaluated, the pattern is not consistent. The high and low prejudiced groups increased in unfavorability following a positive anchor, but the high prejudiced group decreased in unfavorability while the low prejudiced group increased in unfavorability following a negative anchor, as stress increased from mild to severe. The moderately prejudiced group, on the other hand, again decreased in unfavorability as stress increased, following both the positive and negative anchor. Table III contains a summary of the analysis of variance.

To assess any possible differences among experimental groups in ability to solve anagrams, the mean number of anagrams correctly solved was examined. Results from analysis of variance provided no evidence that high, medium and low prejudiced subjects differed in the number of correct solutions within an eighteen minute period ($F = 2.34$, $df\ 2/84$). Thus it may be assumed that stress level created by the anagrams did not differ significantly among experimental groups.

Also no differences were found between male and female evaluation scores for the two persons rated ($F = 1.28$, $df\ 37/57$). No other main effects or interactions were significant.

TABLE III

SUMMARY OF ANALYSIS OF VARIANCE OF EVALUATIONS
OF STRANGERS

Source of Variation	Sum of Squares	df	Mean Square	F
Prejudice	696.7	2	348.4	2.46
Stress	92.1	1	92.1	-
Anchor	1995.6	1	1995.6	15.95**
Prejudice X Stress	1146.7	2	733.5	5.86**
Prejudice X Anchor	704.5	2	352.3	2.82
Stress X Anchor	45.1	1	45.1	
Prejudice X Stress X Anchor	16.2	2	8.1	
Error (a)	10508.8	84	125.1	
Persons	292.0	1	292.0	7.86**
Prejudice X Persons	6.5	2	3.2	
Stress X Persons	1.0	1	1.0	
Anchor X Persons	58.0	1	58.0	1.56
Prejudice X Stress X Persons	17.2	2	8.6	
Prejudice X Anchor X Persons	53.1	2	26.5	
Prejudice X Stress X Anchor X Persons	319.6	2	159.8	4.31**
Error (b)	3141.6	85	37.1	

**p < .01

Discussion

Data supported several expectations and provided clarification of the problem of generalized hostility displacement onto neutral persons. Support was obtained for Rule's (1966) finding that high and low prejudiced persons are similar in their evaluations of other people, following stress, and also for Rokeach's notion (1960) of similarity of extremists' conceptual system.

The present data were also not inconsistent with Berkowitz's findings indicating different judgmental processes for high and low prejudiced persons since it seems very likely, as Rule has pointed out, that the discrepancy is due to the differences in subject selection criteria. In the present study the high prejudiced subjects were selected from the upper one-fifth of the A-S distribution and the upper one-third of the F distribution; the moderately prejudiced subjects from the middle one-fifth and one-third of each distribution, respectively; and the low prejudiced subjects were selected from the lower one-fifth and one-third of each distribution, respectively. In Berkowitz's studies the high and low prejudiced subjects were selected from the upper and lower one-third of the A-S distribution, and the upper and lower one-half of the F distribution, respectively. It seems safe to assume that the differences Berkowitz found between the high and low prejudiced subjects are comparable to the differences found between the high and moderately prejudiced subjects in the present study. Results from the present study as well as those from Rule's (1966) study suggest that future studies on prejudice must sample a

larger number of subjects, at least twice as many as that sampled in Berkowitz's (1961) study, to adequately specify the judgmental categories of high and low prejudiced persons.

With regard to the significant prejudice x stress x anchor x person interaction, stress appeared to broaden the judgmental categories for the high and low prejudiced groups following both a positive and negative anchor. Unfriendliness was generalized to the first person encountered when a negative anchor was provided, and friendliness was generalized when a positive anchor was provided. Unfriendliness or hostility generalization is consistent with scapegoat theory, which would predict assimilation following a negative anchor, and with previous results regarding hostility displacement onto neutral bystanders. Friendliness generalization is a new phenomenon whose significance lies in its demonstration of consistency in the basic underlying psychological displacement process. The implication of these findings is that the effects of stress can be channelled into a favorable or unfavorable direction depending upon the anchor stimuli provided in the particular situation.

The inconsistent pattern in the results of the second person evaluated along with the finding that more unfriendliness was expressed toward the first person evaluated than the second, suggest that the occurrence of the first evaluation altered the stimulus situation for the second, perhaps through hostility reduction. Hostility reduction may be explained by some such mechanism as catharsis or aggression-anxiety.

The catharsis hypothesis maintains that the performance of an aggressive act reduces the instigation to aggression, assuming that there is no further frustration. In the present study the expression of unfriendliness toward the first person evaluated presumably reduced the tendency to express unfriendliness toward the second person.

The aggression-anxiety hypothesis suggests that aggression by a strongly angered person gives rise to guilt or anxiety which serves to inhibit the expression of further hostility. Again, in the present study, the expression of unfriendliness toward the first person evaluated may have aroused guilt or anxiety which inhibited the expression of unfriendliness toward the second person.

Although the behavior of high and low prejudiced individuals is readily interpretable in terms of broadening and narrowing of category widths, the behavior of the moderately prejudiced individual is not. For both the first and second person evaluated the moderately prejudiced group decreased in unfriendliness as stress increased, following both the positive and negative anchor. In other words, the moderately prejudiced person reacts to increased stress with increased friendliness regardless of the anchor stimuli or persons evaluated. It is as though stress serves to establish a set to respond favorably regardless of other situational factors. Another possibility is that stress serves to alert the cognitive processes which make the individual more aware of his high level of hostility and/or the potential consequences, and he bends over backwards, so to speak, to avoid them. In any event, it is evident that the behavior of the moderately prejudiced person is

different from that of the high or low prejudiced person, and at present appears to be a function of stress only, and not dependent upon other external factors for direction.

Greater unfriendliness shown by high and low prejudiced groups than moderately prejudiced groups, following severe stress, is supported by other studies (Rule, 1966; Berkowitz, 1959). As was mentioned previously, if the high and low prejudiced groups in Berkowitz's study are comparable to the high and moderately prejudiced groups in the present study, the results of hostility displacement are similar in each case. Berkowitz found that angered low prejudiced females became friendlier toward a peer while angered high prejudiced females became more hostile. Rule found that high and low prejudiced subjects were more negative in their evaluation of strangers than were moderately prejudiced subjects. The present study found more unfriendliness expressed by high and low prejudiced subjects.

More unfriendliness following a negative anchor than a positive anchor is not an unexpected finding, as it is predictable from scapegoat theory and also from results of previous studies regarding hostility displacement.

In summary, this study demonstrated that there is similarity in behavior of extremists, and that situational and motivational factors such as stress and anchor are important determinants of interpersonal judgments.

References

- Adorno, T. W., Frenkel-Brunswik, Else, Levinson, D. J. & Sanford, R. N. The authoritarian personality. New York: Harper, 1950.
- Asch, S. E. Forming impressions of personality. J. abnorm. soc. Psychol., 1946, 41, 258-290.
- Asch, S. E. Social psychology. New York: Prentice-Hall, 1952.
- Baron, F. & Welsh, G. S. Artistic perception as a possible factor in personality style: its measurement by a figure preference test. J. Psychol., 1952, 33, 199-203.
- Bass, B. M. Authoritarianism or acquiescence? J. abnorm. soc. Psychol., 1955, 51, 616-623.
- Berkowitz, L. Anti-Semitism and the displacement of aggression. J. abnorm. soc. Psychol., 1959, 59, 182-187.
- Berkowitz, L. Some factors affecting the reduction of overt hostility. J. abnorm. soc. Psychol., 1960, 60, 14-21.
- Berkowitz, L. Anti-Semitism, judgmental processes and displacement of hostility. J. abnorm. soc. Psychol., 1961, 62, 210-215.
- Block, J. & Block, Jeanne. An investigation of the relationship between intolerance of ambiguity and ethnocentrism. J. Pers., 1951, 19, 303-311.
- Brown, R. W. A determinant of the relationship between rigidity and authoritarianism. J. abnorm. soc. Psychol., 1953, 48, 469-476.
- Brown, R. W. Social psychology. New York: Free Press, 1965.
- Bruner, J. On perceptual readiness. Psychol. Rev., 1957, 64, 123-152.
- Bruner, J. S. & Tagiuri, R. The perception of people. In G. Lindzey, Handbook of social psychology. Reading: Addison-Wesley, 1954.
- Christie, R. The effect of frustration upon rigidity in problem solution. Amer. Psychologist, 1950, 5, 296-297.
- Christie, R. & Jahoda, Marie. Studies in the scope and method of "The authoritarian personality". New York: Free Press, 1954.
- Cohn, T. S. The relation of the F scale to a response to answer positively. Amer. Psychologist, 1953, 8, 335 (Abstract).

- Couch, A. & Keniston, K. Yeasayers and naysayers: agreeing response set as a personality variable. J. abnorm. soc. Psychol., 1960, 60, 151-174.
- Dillehay, R. C. Judgmental processes in response to a persuasive communication. J. pers. soc. Psychol., 1966, 1, 631-640.
- Epstein, R. Authoritarianism, displaced aggression and social status of the target. J. pers. soc. Psychol., 1965, 2, 585-589.
- Frenkel-Brunswik, Elsie. Intolerance of ambiguity as an emotional and perceptual variable. J. Pers., 1949, 18, 108-143.
- Gardner, R. Cognitive styles in categorizing behavior. J. Pers., 1953, 22, 214-233.
- Helson, H. Adaptation-level as a basis for a quantitative theory of frames of reference. Psychol. Rev., 1948, 55, 297-313.
- Hovland, C. & Pritzker, H. A. Extent of opinion change at a function of amount of change advocated. J. abnorm. soc. Psychol., 1957, 54, 257-261.
- Kutner, B. Patterns of mental functioning associated with prejudice in children. Amer. Psychologist, 1951, 6, 328-329.
- Lewin, K. Conduct, knowledge and acceptance of new values. Resolving social conflicts. New York: Harper & Row, 1948.
- Lindzey, G. Handbook of Social Psychology. Reading: Addison-Wesley, 1959.
- Pepitone, A. The determinants of distortion in social perception. In H. Proshanky & B. Seidenberg, Basic studies in social psychology. New York: Holt, Rinehart & Winston, 1965.
- Pettigrew, T. The measurement and correlates of category width as a cognitive variable. J. Pers., 1958, 26, 532-544.
- Rokeach, M. Generalized mental rigidity as a factor in ethnocentrism. J. abnorm. soc. Psychol., 1948, 43, 259-278.
- Rokeach, M. The open and closed mind. New York: Basic Books, 1960.
- Rule, Brendan. Anti-Semitism, stress and judgments of strangers. J. pers. soc. Psychol., 1966, 3, 132-134.
- Sarason, I. G. The effects of anxiety and threat on the solution of a difficult task. J. abnorm. soc. Psychol., 1961, 62, 165-168.

- Sherif, M. & Cantril, H. The psychology of "attitudes": Part I. Psychol. Rev., 1945, 52, 295-319.
- Sherif, M. & Cantril, H. The psychology of "attitudes": Part II. Psychol. Rev., 1946, 53, 1-54.
- Sherif, M. & Sherif, C. An outline of social psychology. New York: Harpers, 1956.
- Sherif, M. & Hovland, C. I. Social judgment: assimilation and contrast effects in communication and attitude change. New Haven: Yale University Press, 1961.

A P P E N D I C E S

APPENDIX A

ANAGRAMS

1. ETLHHA
2. ETROS
3. RECM I
4. CNEGAH
5. NMGOINR
6. NSRWAE
7. SPRUUE
8. SUTCBII
9. SCLIAO
10. EVSUORN
11. RSANEO
12. IMTCLA
13. ELSAUX

APPENDIX B

RATING SCALE

NAME _____

WARM



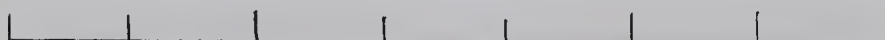
COLD

BAD



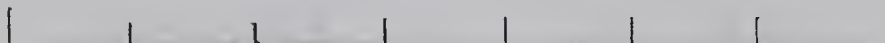
GOOD

FRIENDLY



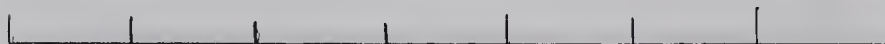
UNFRIENDLY

DEPENDENT



INDEPENDENT

SOCIABLE




UNSOCIABLE

QUARRELSOME



CONGENIAL

GRATEFUL



UNGRATEFUL

STUPID



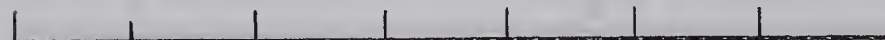
INTELLIGENT

LAZY



DILIGENT

AFFECTIONATE




HATEFUL

DISCONTENTED



CONTENTED

CHEERFUL



GLUM

UNFEELING




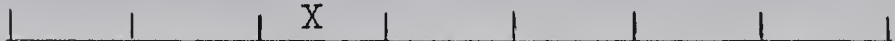




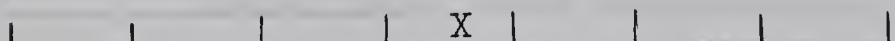






FEELING

APPENDIX C

NEGATIVE ANCHOR - A RAW SCORE OF 70 OR A MEAN
SCORE OF 5.39






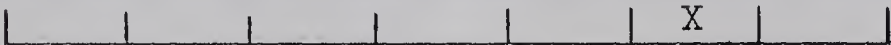
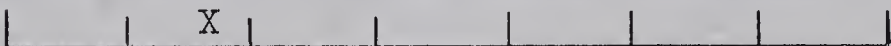
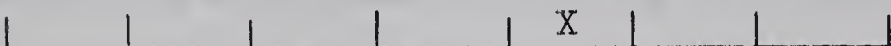
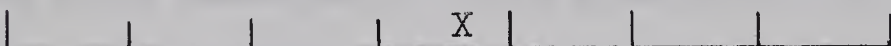

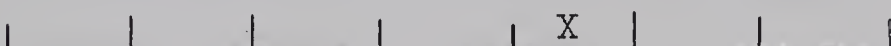

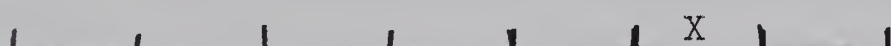
NAME Joe

WARM		COLD
BAD		GOOD
FRIENDLY		UNFRIENDLY
DEPENDENT		INDEPENDENT
SOCIABLE		UNSOCIABLE
QUARRELSOME		CONGENIAL
GRATEFUL		UNGRATEFUL
STUPID		INTELLIGENT
LAZY		DILIGENT
AFFECTIONATE		HATEFUL
DISCONTENTED		CONTENTED
CHEERFUL		GLUM
UNFEELING		FEELING

APPENDIX C (Continued)

POSITIVE SCORE - A RAW SCORE OF 34 OR A MEAN
SCORE OF 2.61

NAME Mike

WARM		COLD
BAD		GOOD
FRIENDLY		UNFRIENDLY
DEPENDENT		INDEPENDENT
SOCIABLE		UNSOCIABLE
QUARRELSOME		CONGENIAL
GRATEFUL		UNGRATEFUL
STUPID		INTELLIGENT
LAZY		DILIGENT
AFFECTIONATE		HATEFUL
DISCONTENTED		CONTENTED
CHEERFUL		GLUM
UNFEELING		FEELING

APPENDIX D

ANTI-SEMITISM SCALE ITEMS

1. Anyone who employs many people should be careful not to hire a large percentage of Jews.
2. One trouble with Jewish businessmen is that they stick together and connive, so that a Gentile doesn't have a fair chance in competition.
3. The Jewish districts in most cities are results of the clannishness and stick-togetherness of Jews.
4. Persecution of the Jews would be largely eliminated if the Jews would make really sincere efforts to rid themselves of their harmful and offensive faults.
5. I can hardly imagine myself marrying a Jew.
6. Jewish leaders should encourage Jews to be more inconspicuous, and to keep out of professions and activities already overcrowded with Jews, and to keep out of the public notice.
7. The trouble with letting Jews into a nice neighborhood is that they gradually give it a typical Jewish atmosphere.
8. No matter how Canadian a Jew may seem to be, there is always something different and strange, something basically Jewish underneath.
9. There may be a few exceptions, but in general, Jews are pretty much alike.
10. There are too many Jews in the various agencies and bureaus in Ottawa and they have too much control over our national policies.

APPENDIX D (continued)

CALIFORNIA F SCALE ITEMS

1. Obedience and respect for authority are the most important virtues children should learn.
2. Science has its place, but there are many important things that can never possibly be understood by the human mind.
3. A person who has bad manners, habits and breeding can hardly expect to get along with decent people.
4. When a person has a problem or worry, it is best for him not to think about it, but to keep busy with more cheerful things.
5. Every person should have complete faith in some supernatural power whose decisions he obeys without question.
6. No weakness or difficulty can hold us back if we have enough will power.
7. Human nature being what it is, there will always be war and conflict.
8. Nowadays when so many different kinds of people move around and mix together so much, a person has to protect himself especially carefully against catching an infection or disease from them.
9. If people would talk less and work more, everybody would be better off.
10. Young people get rebellious ideas sometimes, but as they grow up they ought to get over them and settle down.
11. What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.
12. Nowadays more and more people are prying into matters that should remain personal and private.
13. Some people are born with the urge to jump from high places.
14. An insult to our honor should always be punished.
15. Familiarity breeds contempt.

16. Wars and social troubles may some day be ended by an earthquake or flood that will destroy the whole world.
17. Sex crimes, such as rape and attacks on children, deserve more than mere imprisonment; such criminals ought to be publicly whipped or worse.
18. The businessman and the manufacturer are much more important to society than the artist and the professor.
19. What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith.
20. There is hardly anything lower than a person who does not feel great love, gratitude and respect for his parents.
21. People can be divided into two classes: the weak and the strong.
22. The wild sex life of the old Greeks and Romans was tame compared to some of the goings-on in this country, even in places where people might least expect it.
23. Homosexuals are hardly better than criminals and ought to be severely punished.
24. No sane, normal, decent person could ever think of hurting a close friend or relative.
25. Most of our social problems would be solved if we could somehow get rid of the immoral, crooked and feeble-minded.
26. Some day it will probably be shown that astrology can explain a lot of things.
27. Most people don't realize how much our lives are controlled by plots hatched in secret places.
28. Nobody ever learned anything really important except through suffering.

B29853